



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,731	08/12/2002	Francois Charette	200-1297 RLC	6580
22844 7590 06/04/2008 FORD GLOBAL TECHNOLOGIES, LLC FAIRLANE PLAZA SOUTH, SUITE 800 330 TOWN CENTER DRIVE DEARBORN, MI 48126				
EXAMINER CHARIQOUL, MOHAMED				
ART UNIT 2857		PAPER NUMBER		
MAIL DATE 06/04/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* FRANCOIS CHARETTE, VIKAS JUNEJA, SUHAS  
VENKATAPPA, RICK S. HOOKER, RONALD LOUIS QUAGLIA,  
MICHAEL ALAN BLOMMER, and MARK NORMAN MASKILL

---

Appeal 2008-0236  
Application 10/064,731  
Technology Center 2800

---

Decided: June 4, 2008

---

Before ANITA PELLMAN GROSS, MAHSHID D. SAADAT, and  
KEVIN F. TURNER, *Administrative Patent Judges*.

GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1, 2, 4 through 13, and 15 through 20. We have jurisdiction under 35 U.S.C. § 6(b).

Appellants' invention relates to a method of objectively monitoring the noise level in a vehicle or vehicle part and comparing the noise level to a

reference value. *See generally* Spec. paragraph [0002]. Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A method for objectively monitoring a noise level occurring in a product during use comprising the steps of:

imparting energy to the product to simulate an in use condition of the product;

measuring the sound level emitted from the product;

establishing a threshold metric based on a sound level;

generating an objective metric based on the measured sound level includes the steps of acquiring sound data for a defined time period, and computing an objective metric based on an N10 loudness scale from the acquired sound data;

comparing the objective metric with the threshold metric; and

generating feedback, the feedback including information relating to the comparison of the objective metric and the threshold metric.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Rayment	US 5,551,298	Sep. 03, 1996
Uhlig	US 6,257,063 B1	Jul. 10, 2001
Hamada	US 2004/0015251 A1	Jan. 22, 2004

NVH Reduction Trends, *Automotive Engineering Int'l Online*, 1-3 (1999), [http://www.sae.org/automag/nvh\\_reduction/03.htm](http://www.sae.org/automag/nvh_reduction/03.htm). (NVH)

Claims 1, 4, 5, 10, and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Rayment in view of Uhlig and NVH.

Claims 2, 6 through 9, 12, 13, and 15 through 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Rayment in view of Uhlig, NVH, and Hamada.

We refer to the Examiner's Answer (mailed April 2, 2007) and to Appellants' Brief (filed December 18, 2006) and Reply Brief (filed June 1, 2007) for the respective arguments.

### SUMMARY OF DECISION

As a consequence of our review, we will reverse the obviousness rejections of claims 1, 2, 4 through 13, and 15 through 20.

### OPINION

The Examiner asserts (Ans. 3) that Rayment discloses all of the steps of independent claims 1 and 10 except for measuring the sound level emitted from a product. The Examiner asserts (Ans. 4) that Uhlig teaches the step of measuring sound level, and that it would have been obvious to incorporate such measurements into Rayment to "determine whether the sound level emitted from the product is within the acceptable range." Appellants contend (App. Br. 5) that Rayment subjectively determines the frequency at which a noise starts and at which the noise stops, rather than the claimed step of measuring the sound level emitted from a product. Further, Appellants contend (App. Br. 5) that Rayment fails to disclose establishing a threshold metric based on the sound level. Appellants also contend (App. Br. 6-8) that Uhlig does not measure the sound level emitted from a product. Instead, Uhlig discloses measuring the sound level of a product until a resonant frequency is reached, switching off the applied vibrational energy,

and then measuring the decay rate of the sound level. Last, Appellants contend (App. Br. 8-10) that the Examiner has failed to provide a motivation, suggestion, or teaching for combining Rayment and Uhlig. The first issue before us is whether a combination of Rayment and Uhlig discloses the steps of measuring a sound level emitted from a product, establishing a threshold metric based on the sound level, and comparing the measured sound level with the threshold metric.

As pointed out by Appellants and admitted by the Examiner, Rayment does not measure the sound level emitted by a product. Rayment records the frequency at which a sound begins and a frequency at which a sound ends. Since Rayment is not concerned with sound levels, Rayment not only fails to disclose measuring the sound level, but also fails to teach establishing a threshold metric based on a sound level. As explained by Appellants, Uhlig measures the sound level to determine the resonant frequency, stops imparting energy to the product, and then measures the decay of the sound level. Although Uhlig does measure the sound level, Uhlig does not establish a threshold metric based on the sound level, as Uhlig is interested in the decay rate of the sound level, not in the sound level itself. Accordingly, any combination of Rayment and Uhlig lacks a teaching or suggestion of establishing a threshold metric based on a sound level and comparing the measured sound level with the threshold metric. NVH merely mentions the statistical measure N10 that is used to describe noise measurements and, therefore, fails to overcome the shortcomings of Rayment and Uhlig. Consequently, we cannot sustain the obviousness rejection of independent claims 1 and 10 and their dependents, claims 4, 5, and 11.

For claims 2, 6 through 9, 12, 13, and 15 through 20, the Examiner (Ans. 4-5) adds Hamada to the combination of Rayment, Uhlig, and NVH. Regarding dependent claims 2, 6 through 9, 12, 13, and 15 through 17, Hamada does not cure the deficiency of the primary combination. Hamada discloses (paragraphs [0028] and [0031]) that analysis and evaluation of digitalized measured sound data are based on frequency, frequency spectrum, and waveform. Nowhere does Hamada teach or suggest comparing the measured sound level with a threshold metric based on sound level. Accordingly, the combination of Rayment, Uhlig, NVH, and Hamada does not teach or suggest all limitations of the claims, and we cannot sustain the obviousness rejection of claims 2, 6 through 9, 12, 13, and 15 through 17.

Independent claim 18 includes the steps of measuring a sound level emitted from a vehicle and subjectively evaluating the vehicle to determine the source of the sound when an objective metric based on the sound level exceeds a threshold metric. Although claim 18 does not explicitly recite that the threshold metric is based on sound level, since the objective metric is based on the sound level, and the objective metric is compared to the threshold metric, the threshold metric implicitly is based on sound level as well. As we determined *supra* that the combination of Rayment, Uhlig, NVH, and Hamada fails to teach or suggest comparing the measured sound level with a threshold metric based on sound level, independent claim 18 and its dependents, claims 19 and 20, would not have been obvious over the applied combination.

In addition, we note that Hamada discloses (paragraph [0003]) that in prior art systems, the cause of an abnormal sound is determined by subjective evaluation of the sound. Hamada's objective is to eliminate the subjectivity and evaluate sounds based on fixed criteria. *See* Hamada, paragraph [0003]. Accordingly, the step of subjectively evaluating the vehicle to determine the source of the sound emitted from the vehicle, recited in claims 18 through 20, is contrary to the intended purpose of Hamada, and such a modification of Hamada would render the reference inoperable for its intended purpose. *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). *In re Fritch*, 972 F.2d 1260, 1265-66 n.12 (Fed. Cir. 1992). Therefore, for this additional reason, we cannot sustain the obviousness rejection of claims 18 through 20.

#### ORDER

The decision of the Examiner rejecting claims 1, 2, 4 through 13, and 15 through 20 under 35 U.S.C. § 103 is reversed.

REVERSED

tdl/gw

FORD GLOBAL TECHNOLOGIES, LLC  
FAIRLANE PLAZA SOUTH, SUITE 800  
330 TOWN CENTER DRIVE  
DEARBORN, MI 48126